



## Topic: Diabetes and Kidney Disease

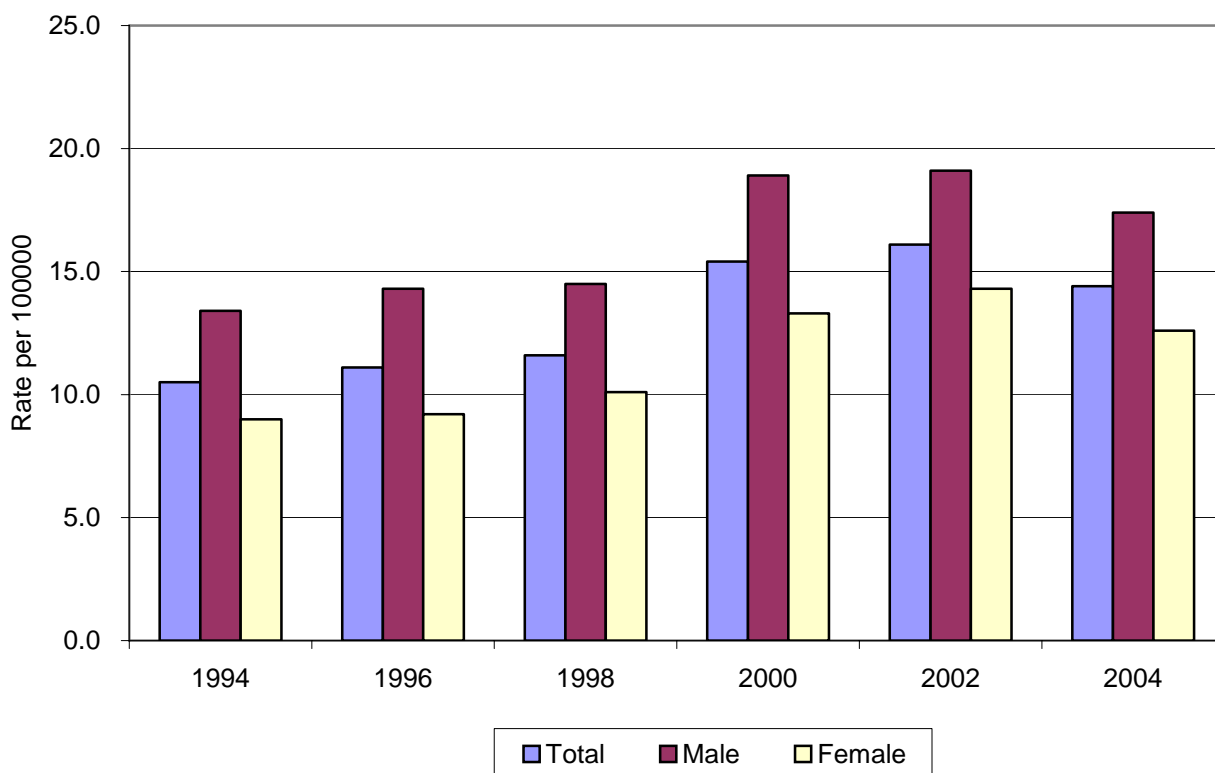
### 19. Kidney Disease and Related Deaths

Chronic kidney disease (CKD) is a progressive, permanent condition in which the kidneys are damaged and gradually lose their effectiveness. People at highest risk for CKD are those with diabetes and/or hypertension, family history of kidney disease, seniors, and minorities. Children who are diagnosed as overweight due to inactivity are also at high risk for Type 2 diabetes.

#### *How are we doing?*

Chronic Kidney Disease is a serious public health problem; there are approximately 370,000 people in the U.S. with kidney failure and this number is expected to double by the year 2010. In Michigan, the prevalence of CKD is estimated at 816,000 (10.9%) of Michigan adults. It is estimated that 11% of the adults living in Michigan age 20 years of age or older in 2002 have CKD, and many do not know it. Even more Michigan residents (769,000) were at increased risk of developing the disease.

**Kidney Disease-Related Death Rate  
By Gender in Michigan, 1994-2004**



Starting in 1999, cause of death is coded using ICD-10, a different coding system than ICD-9. Thus, for certain causes of death, differences in numbers and rates of death in pre- and post-1999 data may be due to this change. For kidney-related mortality, the new coding scheme identifies approximately 23 percent more deaths than the previous coding scheme.

#### *How does Michigan compare with the U.S.?*



Research indicates that there is a steady, alarming growth in incidence of CKD nationally, especially kidney failure, which has been doubling every 10 years in the United States. Nationally, one in nine adults over 20 years of age (20 million) have CKD. Michigan's End Stage Renal Disease (ESRD) incidence rate of 350 per million exceeds the nation's rate of 337 per million.

### ***How are different populations affected?***

There are significant racial and ethnic disparities within kidney failure morbidity and mortality rates. Blacks are 4.7 times more likely than Caucasians to be treated for kidney failure, and they develop kidney failure at an earlier age. Although they comprise approximately 14% of the population in Michigan, Blacks account for more than 47% of the dialysis population.

Blacks, Native-Americans, Hispanics and Asian-Americans are all at increased risk for both CKD and kidney failure. In 2000, Blacks had a kidney failure rate of 777 cases per million, Native-Americans had a rate of 501 cases per million, Asian-Americans had a rate of 281 cases per million, and Hispanics had a rate of 276 cases per million. The kidney failure rate for Whites that same year was 269 cases per million.

### ***What is the Department of Community Health doing to improve this indicator?***

Since kidney disease can be prevented or significantly delayed, the Michigan Department of Community Health joined with the National Kidney Foundation of Michigan (NKFM) to develop a plan for intervention. School prevention programs and a Beauty Salon/Barber shop initiative aimed at reaching African-Americans with detection and prevention activities are provided by NKFM. Finally, a public awareness program and a continuous quality improvement initiative seek to prevent kidney disease and improve care.